## **CLAIMS**

- 1. Shrink film for wrapping foodstuffs, comprising:
  - a plurality of overlaid layers constituted by non-crosslinked thermoplastic polymers of different natures, wherein the material that constitutes one of the outer layers melts at a lower temperature than the materials that constitute the other layers;
  - three layers constituted by polymers having a Young's modulus substantially higher than that of the polymers which constitute the other layers;

## 10 characterised in that:

5

- one of said three layers with a higher Young's modulus is on the outside of the film, whereas the other two layers with a higher Young's modulus are on the inside of the film;
- each of said three layers with a higher Young's modulus is separated from the other layers with a higher Young's modulus by at least one layer with a lower Young's modulus.
- 2. Film as claimed in claim 1, characterised in that said three layers with a higher Young's modulus are highly impermeable to gases, especially oxygen and aqueous steam.
- 3. Film as claimed in claim 1, characterised in that said two layers with a higher Young's modulus which are situated inside the film are located on the opposite side, in relation to the neutral plane of the film, from the layer with a higher Young's modulus which lies on the outside of the film.
- Film as claimed in claim 3, characterised in that the sequence of all the layers
   constituting said film, and their thickness, from which the distance of each of said layers from the neutral plane of said film derives, are determined in such

10

20

a way that the sum of the moments exerted by said layers in relation to said neutral plane after the process of biaxial orientation is substantially nil, wherein:

- the moment exerted by a single layer in relation to the neutral plane is equal to the product of the membrane force exerted by said layer and the distance of the average plane of said layer from the neutral plane of the film;
- the membrane force exerted by said layer is equal to the product of the Young's modulus of the material which constitutes said layer, the thickness of said layer and the prevented shrinkage, expressed as a percentage.
- 5. Film as claimed in claims 1 to 3, characterised in that the layers with a higher Young's modulus are constituted by polymers of the polyamide family.
- 6. Film as claimed in claims 1 to 5, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the internal part
    of the wrapping, and can be constituted by ionomers containing zinc or
    sodium, a low-density polyethylene or linear low-density polyethylene
    (LDPE/LLDPE), or an ethylene or octene plastomer;
  - layer B, thickness 5 to 15%, first adhesive layer consists of an adhesive polymer selected from among terionomers, or ethylene modified with maleic anhydride copolymers, or an EVA/ethylene methacrylic acid copolymer;
- layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
   consists of a polyamide polymer selected from among PA 6, PA 6/66,

10

15

25

amorphous or aliphatic PA or a mixture thereof, possibly with the addition of terionomers;

- layer D, thickness 10 to 20%, second adhesive layer consists of an adhesive polymer selected from among terionomers, or ethylene modified with maleic anhydride copolymers, or of an EVA/ethylene methacrylic acid copolymer, and may be equal to or different from layer B;
- layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) consists of a polyamide polymer selected from among PA 6, PA 6/66, amorphous or aliphatic PA or a mixture thereof, possibly with the addition of terionomers, and may be equal to or different from layer C, alternatively, PVA or PGA can be used;
- layer F, thickness 5 to 15%, third adhesive layer consists of an adhesive polymer selected from among terionomers, or ethylene modified with maleic anhydride copolymers, or of an EVA/ethylene methacrylic acid copolymer, and may be equal to or different from layers B and D;
- layer G, thickness 5 to 25%, outer layer and fourth barrier layer (mainly to aqueous steam) – consists of a polyamide polymer selected from among PA 6 or PA 6/66.
- 7. Film as claimed in claim 6, characterised in that it comprises seven layers (A,
  20 B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 5 to 10%, first adhesive layer consists of a terionomer;
  - layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)

10

15

- consists of a polyamide polymer selected from among polyamides PA
  6/66;
- layer D, thickness 10 to 20%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66;
  - layer F, thickness 5 to 15%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
  - layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66.
- 8. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 5 to 15%, first adhesive layer consists of a terionomer;
  - layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
     consists of a mixture of polyamides PA 6/66 and aliphatic PA;
- layer D, thickness 10 to 20%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
  - layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66;
  - layer F, thickness 5 to 15%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
  - layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to

10

15

aqueous steam) - consists of a polyamide polymer PA 6/66.

- 9. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
    - layer B, thickness 5 to 15%, first adhesive layer consists of a terionomer;
- layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
   consists of a mixture of polyamides PA 6/66 + amorphous PA blended with a terionomer;
  - layer D, thickness 10 to 20%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
  - layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66;
    - layer F, thickness 5 to 15%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
    - layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 10. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
- layer B, thickness 5 to 15%, first adhesive layer consists of a terionomer;

10

15

- layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
   consists of a polyamide polymer selected from among polyamides PA
   6/66;
- layer D, thickness 10 to 20%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) – consists of a mixture of polyamides PA 6/66 + amorphous PA;
- layer F, thickness 5 to 15%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 11. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 5 to 15%, first adhesive layer consists of a terionomer;
  - layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
     consists of a polyamide polymer selected from among polyamides PA
     6/66;
    - layer D, thickness 10 to 20%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous
   steam) consists of a mixture of polyamides PA 6/66 + amorphous PA
   blended with a terionomer;

15

20

- layer F, thickness 5 to 15%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 12. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 5 to 15%, first adhesive layer consists of a terionomer;
    - layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
       consists of a polyamide polymer selected from among polyamides PA
       6/66;
    - layer D, thickness 10 to 20%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
      - layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) – consists of an aliphatic PA polymer;
      - layer F, thickness 5 to 15%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
      - layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
    - 13. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
      - layer A, thickness 10 to 30%, welding layer constitutes the inner part of

10

- the wrapping, and is constituted by an ethylene or octene plastomer
- layer B, thickness 5 to 15%, first adhesive layer consists of LLDPE modified with maleic anhydride;
- layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
   consists of a mixture of polyamides PA 6/66 + amorphous PA;
- layer D, thickness 10 to 20%, second adhesive layer consists of LLDPE modified with maleic anhydride;
- layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66;
- layer F, thickness 5 to 15%, third adhesive layer consists of LLDPE modified with maleic anhydride;
  - layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 14. Film as claimed in claim 6, characterised in that it comprises seven layers (A,
  B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by LLDPE;
  - layer B, thickness 5 to 15%, first adhesive layer consists of LLDPE modified with maleic anhydride;
  - layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
     consists of a mixture of polyamides PA 6/66 + amorphous PA;
  - layer D, thickness 10 to 20%, second adhesive layer consists of LLDPE modified with maleic anhydride;
- layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66;

- layer F, thickness 5 to 15%, third adhesive layer consists of LLDPE modified with maleic anhydride;
- layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 15. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by LDPE;
- layer B, thickness 5 to 15%, first adhesive layer consists of an
   EVA/ethylene methacrylic acid copolymer;
  - layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
     consists of a mixture of polyamides PA 6/66 + PA 6;
  - layer D, thickness 10 to 20%, second adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
  - layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66;
  - layer F, thickness 5 to 15%, third adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
- layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66.
  - 16. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
- layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;

10

20

- layer B, thickness 5 to 15%, first adhesive layer consists of a terionomer;
- layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
   consists of a polyamide polymer selected from among polyamides PA 6/66;
- layer D, thickness 10 to 20%, second adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
- layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous steam) – consists of PVA (polyvinyl alcohol);
- layer F, thickness 5 to 15%, third adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
  - layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66.
- 17. Film as claimed in claim 6, characterised in that it comprises seven layers (A,
  B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 10 to 30%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 5 to 15%, first adhesive layer consists of a terionomer;
    - layer C, thickness 10 to 20%, first barrier layer (mainly to aqueous steam)
       consists of a polyamide polymer selected from among polyamides PA
       6/66;
    - layer D, thickness 10 to 20%, second adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
    - layer E, thickness 10 to 20%, second barrier layer (mainly to aqueous

steam) - consists of PGA (polyglycolic acid);

5

10

15

- layer F, thickness 5 to 15%, third adhesive layer consists of an
   EVA/ethylene methacrylic acid copolymer;
- layer G, thickness 5 to 25%, outer layer and third barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66.
- 18. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and can be constituted by ionomers containing zinc or sodium, a low-density polyethylene or linear low-density polyethylene (LDPE/LLDPE), or an ethylene or octene plastomer;
  - layer B, thickness 10%, first adhesive layer consists of an adhesive polymer selected from among ethylene copolymers or terionomers modified with maleic anhydride, or of an EVA/ethylene methacrylic acid copolymer;
  - layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
    consists of a polyamide polymer selected from among PA 6, PA 6/66,
    amorphous or aliphatic PA or a mixture thereof, possibly with the addition
    of terionomers;
  - layer D, thickness 15%, second adhesive layer consists of an adhesive polymer selected from among terionomers, or ethylene modified with maleic anhydride copolymers, or of an EVA/ethylene methacrylic acid copolymer, and may be equal to or different from layer B;
- layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
   consists of a polyamide polymer selected from among PA 6, PA 6/66,

WO 2004/110755 PCT/IB2004/002497

amorphous or aliphatic PA or a mixture thereof, possibly with the addition of terionomers, and may be equal to or different from layer C; alternatively, PVA (polyvinyl alcohol) or PGA (polyglycolic acid) can be used;

 layer F, thickness 10%, third adhesive layer – consists of an adhesive polymer selected from among terionomers, or ethylene modified with maleic anhydride copolymers, or of an EVA/ethylene methacrylic acid copolymer, and may be equal to or different from layers B and D;

5

15

- layer G, thickness 15%, outer layer and fourth barrier layer (mainly to aqueous steam) consists of a polyamide polymer selected from among PA 6 and PA 6/66.
  - 19. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
    - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
    - layer B, thickness 10%, first adhesive layer consists of a terionomer;
    - layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
      consists of a polyamide polymer selected from among polyamides PA
      6/66;
    - layer D, thickness 15%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
    - layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
       consists of a polyamide polymer PA 6/66;
- layer F, thickness 10%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;

10

- layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 20. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 10%, first adhesive layer consists of a terionomer;
  - layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
     consists of a mixture of polyamides PA 6/66 + aliphatic PA;
  - layer D, thickness 15%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
  - layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
     consists of a polyamide polymer PA 6/66;
  - layer F, thickness 10%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
    - layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66.
- 21. Film as claimed in claim 6, characterised in that it comprises seven layers (A,B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 10%, first adhesive layer consists of a terionomer;
- layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
   consists of a mixture of polyamides PA 6/66 + amorphous PA blended

15

20

with a terionomer;

- layer D, thickness 15%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
   consists of a polyamide polymer PA 6/66;
- layer F, thickness 10%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 22. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 10%, first adhesive layer consists of a terionomer;
    - layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
      consists of a polyamide polymer selected from among polyamides PA
      6/66;
    - layer D, thickness 15%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
    - layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
       consists of a mixture of polyamides PA 6/66 + amorphous PA;
    - layer F, thickness 10%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66.

- 23. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 10%, first adhesive layer consists of a terionomer;
  - layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
    consists of a polyamide polymer selected from among polyamides PA
    6/66;
- layer D, thickness 15%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
  - layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
    consists of a mixture of polyamides PA 6/66 + amorphous PA blended
    with a terionomer;
- layer F, thickness 10%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
  - layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 24. Film as claimed in claim 6, characterised in that it comprises seven layers (A,
  B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 10%, first adhesive layer consists of a terionomer;
- layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
   consists of a polyamide polymer selected from among polyamides PA

6/66;

5

- layer D, thickness 15%, second adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
   consists of an aliphatic PA polymer;
- layer F, thickness 10%, third adhesive layer consists of an adhesive polymer selected from among the terionomers;
- layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 25. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by an ethylene or octene plastomer;
- layer B, thickness 10%, first adhesive layer consists of LLDPE modified with maleic anhydride;
  - layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
     consists of a mixture of polyamides PA 6/66 + amorphous PA;
  - layer D, thickness 15%, second adhesive layer consists of LLDPE modified with maleic anhydride;
    - layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
       consists of a polyamide polymer PA 6/66;
    - layer F, thickness 10%, third adhesive layer consists of LLDPE modified with maleic anhydride;
- layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66.

- 26. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by LLDPE;
  - layer B, thickness 10%, first adhesive layer consists of LLDPE modified with maleic anhydride;
  - layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
     consists of a mixture of polyamides PA 6/66 + amorphous PA;
- layer D, thickness 15%, second adhesive layer consists of LLDPE modified with maleic anhydride;
  - layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
     consists of a polyamide polymer PA 6/66;
  - layer F, thickness 10%, third adhesive layer consists of LLDPE modified with maleic anhydride;
  - layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 27. Film as claimed in claim 6, characterised in that it comprises seven layers (A, B, C, D, E, F and G), starting from the layer in contact with the product,
  20 composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by LDPE;
  - layer B, thickness 10%, first adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
- layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
   consists of a mixture of polyamides PA 6/66 + PA 6;

15

- layer D, thickness 15%, second adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
- layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
   consists of a polyamide polymer PA 6/66;
- layer F, thickness 10%, third adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
- layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
- 28. Film as claimed in claim 6, characterised in that it comprises seven layers (A,
  B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
  - layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
  - layer B, thickness 10%, first adhesive layer consists of a terionomer;
  - layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
    consists of a polyamide polymer selected from among polyamides PA
    6/66;
    - layer D, thickness 15%, second adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
- layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
   consists of PVA (polyvinyl alcohol);
  - layer F, thickness 10%, third adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
  - layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) – consists of a polyamide polymer PA 6/66.
  - 29. Film as claimed in claim 6, characterised in that it comprises seven layers (A,

- B, C, D, E, F and G), starting from the layer in contact with the product, composed as follows:
- layer A, thickness 20%, welding layer constitutes the inner part of the wrapping, and is constituted by ionomers containing zinc or sodium;
- layer B, thickness 10%, first adhesive layer consists of a terionomer;
- layer C, thickness 15%, first barrier layer (mainly to aqueous steam) –
  consists of a polyamide polymer selected from among polyamides PA
  6/66;
- layer D, thickness 15%, second adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
- layer E, thickness 15%, second barrier layer (mainly to aqueous steam) –
   consists of PGA (polyglycolic acid);
- layer F, thickness 10%, third adhesive layer consists of an EVA/ethylene methacrylic acid copolymer;
- layer G, thickness 15%, outer layer and third barrier layer (mainly to aqueous steam) consists of a polyamide polymer PA 6/66.